#7 OIPE

RAW SEQUENCE LISTING DATE: 09/07/2001 PATENT APPLICATION: US/09/554,941 TIME: 16:24:51

Input Set : A:\SUBSTITUTE SEQUENCE LISTING.txt
Output Set: N:\CRF3\09072001\I554941.raw

SEQUENCE LISTING

```
ENTERED
      4 (1) GENERAL INFORMATION:
             (i) APPLICANT: Atkinson, Howard J
      7
                             McPherson, Michael J
      Я
                             Urwin, Peter E
            (ii) TITLE OF INVENTION: Proteinase Inhibitor Fusion Proteins
     10
           (iii) NUMBER OF SEQUENCES: 21
     12
     14
            (iv) CORRESPONDENCE ADDRESS:
     15
                  (A) ADDRESSEE: Syngenta Biotechnology, Inc.
     16
                  (B) STREET: 3054 Cornwallis Road
     17
                  (C) CITY: RTP
     18
                  (D) STATE: NC
                  (E) COUNTRY: USA
     20
                  (F) ZIP: 27709
     22
             (V) COMPUTER READABLE FORM:
     23
                  (A) MEDIUM TYPE: Floppy disk
                  (B) COMPUTER: IBM PC compatible
     25
                  (C) OPERATING SYSTEM: PC-DOS/MS-DOS
     26
                  (D) SOFTWARE: PatentIn Release #1.0, Version #1.25
     28
            (vi) CURRENT APPLICATION DATA:
C--> 29
                  (A) APPLICATION NUMBER: US/09/554,941
C--> 30
                  (B) FILING DATE: 22-May-2000
     31
                  (C) CLASSIFICATION:
     33
          (viii) ATTORNEY/AGENT INFORMATION:
     34
                  (A) NAME: Meigs, J. Timothy
     35
                  (B) REGISTRATION NUMBER: 38,241
     36
                  (C) REFERENCE/DOCKET NUMBER: S-30287A
     38
            (ix) TELECOMMUNICATION INFORMATION:
                  (A) TELEPHONE: 919-541-8587
     42 (2) INFORMATION FOR SEQ ID NO: 1:
     44
             (i) SEQUENCE CHARACTERISTICS:
     45
                  (A) LENGTH: 14 amino acids
     46
                  (B) TYPE: amino acid
     47
                  (C) STRANDEDNESS: single
     48
                  (D) TOPOLOGY: linear
     50
            (ii) MOLECULE TYPE: peptide
     52
           (iii) HYPOTHETICAL: NO
C--> 54
            (iv) ANTI-SENSE: NO
    56
             (v) FRAGMENT TYPE: internal
    58
            (vi) ORIGINAL SOURCE:
    59
                  (A) ORGANISM: PsMTa Linker
    62
            (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 1:
    64
            Val Ile Leu Gly Val Gly Pro Ala Lys Ile Gln Phe Glu Gly
    65
    67 (2) INFORMATION FOR SEO ID NO: 2:
    69
             (i) SEQUENCE CHARACTERISTICS:
    70
                  (A) LENGTH: 11 amino acids
```

DATE: 09/07/2001

TIME: 16:24:51

Input Set : A:\SUBSTITUTE SEQUENCE LISTING.txt Output Set: N:\CRF3\09072001\I554941.raw 71 (B) TYPE: amino acid 72 (C) STRANDEDNESS: single 73 (D) TOPOLOGY: linear 75 (ii) MOLECULE TYPE: peptide 77 (iii) HYPOTHETICAL: NO C--> 79 (iv) ANTI-SENSE: NO 81 (v) FRAGMENT TYPE: internal 83 (vi) ORIGINAL SOURCE: 84 (A) ORGANISM: galactose oxidase linker 87 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 2: 89 Gln Ala Ser Ser Tyr Thr Ala Pro Gln Pro Gln 90 5 92 (2) INFORMATION FOR SEO ID NO: 3: (i) SEQUENCE CHARACTERISTICS: 95 (A) LENGTH: 30 base pairs 96 (B) TYPE: nucleic acid 97 (C) STRANDEDNESS: single 98 (D) TOPOLOGY: linear 100 (ii) MOLECULE TYPE: DNA (genomic) 102 (iii) HYPOTHETICAL: NO C--> 104 (iv) ANTI-SENSE: NO 106 (vi) ORIGINAL SOURCE: 107 (A) ORGANISM: oligo P1 110 · (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3: 112 ATGTCGAGCG ACGGACGGCC GGTGCTTGGC 30 114 (2) INFORMATION FOR SEQ ID NO: 4: 116 (i) SEQUENCE CHARACTERISTICS: 117 (A) LENGTH: 48 base pairs 118 (B) TYPE: nucleic acid 119 (C) STRANDEDNESS: single 120 (D) TOPOLOGY: linear 122 (ii) MOLECULE TYPE: DNA (genomic) 124 (iii) HYPOTHETICAL: NO C--> 126 (iv) ANTI-SENSE: NO 128 (vi) ORIGINAL SOURCE: 129 (A) ORGANISM: oligo P2 132 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4: 134 GATCTTCGCC GGACCGACGC CAAGAATCAC GGCATTTGCA CTGGCATC 48 136 (2) INFORMATION FOR SEQ ID NO: 5: 138 (i) SEQUENCE CHARACTERISTICS: 139 (A) LENGTH: 48 base pairs 140 (B) TYPE: nucleic acid 141 (C) STRANDEDNESS: single 142 (D) TOPOLOGY: linear 144 (ii) MOLECULE TYPE: DNA (genomic) 146 (iii) HYPOTHETICAL: NO C--> 148 (iv) ANTI-SENSE: NO

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/554,941

(vi) ORIGINAL SOURCE:

(A) ORGANISM: oligo P3

150

151

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/554,941

DATE: 09/07/2001 TIME: 16:24:51

Input Set : A:\SUBSTITUTE SEQUENCE LISTING.txt

Output Set: N:\CRF3\09072001\I554941.raw

```
(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 5:
     154
     156 GTCGGTCCGG CGAAGATCCA GTTTGAAGGT AGTAATCATC ATGATGAC
                                                                                   48
     158 (2) INFORMATION FOR SEQ ID NO: 6:
              (i) SEQUENCE CHARACTERISTICS:
     161
                    (A) LENGTH: 32 base pairs
     162
                    (B) TYPE: nucleic acid
     163
                    (C) STRANDEDNESS: single
     164
                    (D) TOPOLOGY: linear
     166
             (ii) MOLECULE TYPE: DNA (genomic)
     168
            (iii) HYPOTHETICAL: NO
C--> 170
             (iv) ANTI-SENSE: NO
     172
             (vi) ORIGINAL SOURCE:
     173
                    (A) ORGANISM: oligo P4
     176
             (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 6:
     178 TTCTTACTCA TCATCTTCAT CCCTGGACTT GC
                                                                                   32
     180 (2) INFORMATION FOR SEQ ID NO: 7:
     182
              (i) SEQUENCE CHARACTERISTICS:
     183
                   (A) LENGTH: 45 base pairs
     184
                   (B) TYPE: nucleic acid
     185
                   (C) STRANDEDNESS: single
     186
                   (D) TOPOLOGY: linear
     188
             (ii) MOLECULE TYPE: DNA (genomic)
     190
            (iii) HYPOTHETICAL: NO
C--> 192
             (iv) ANTI-SENSE: NO
     194
             (vi) ORIGINAL SOURCE:
     195
                   (A) ORGANISM: oligo P5
     198
             (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 7:
     200 CTGGGGGGCT GTGTAAGAAC TAGCTTGGGC ATTTGCACTG GCATC
                                                                                   45
     202 (2) INFORMATION FOR SEQ ID NO: 8:
     204
              (i) SEQUENCE CHARACTERISTICS:
     205
                   (A) LENGTH: 45 base pairs
     206
                   (B) TYPE: nucleic acid
     207
                   (C) STRANDEDNESS: single
     208
                   (D) TOPOLOGY: linear
     210
             (ii) MOLECULE TYPE: DNA (genomic)
     212
            (iii) HYPOTHETICAL: NO
C--> 214
             (iv) ANTI-SENSE: NO
     216
             (vi) ORIGINAL SOURCE:
     217
                   (A) ORGANISM: oligo P6
     220
             (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 8:
     222 AGTTCTTACA CAGCCCCCCA GCCTGGTAGT AATCATCATG ATGAC
                                                                                  45
     224 (2) INFORMATION FOR SEQ ID NO: 9:
     226
              (i) SEQUENCE CHARACTERISTICS:
     227
                   (A) LENGTH: 31 base pairs
     228
                   (B) TYPE: nucleic acid
    229
                   (C) STRANDEDNESS: single
    230
                   (D) TOPOLOGY: linear
    232
             (ii) MOLECULE TYPE: DNA (genomic)
    234
            (iii) HYPOTHETICAL: NO
```

RAW SEQUENCE LISTING

DATE: 09/07/2001

PATENT APPLICATION: US/09/554,941

TIME: 16:24:51

Input Set : A:\SUBSTITUTE SEQUENCE LISTING.txt

Output Set: N:\CRF3\09072001\I554941.raw

```
(iv) ANTI-SENSE: NO
C--> 236
     240
             (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 9:
                                                                                   31
     242 ACTATGGATC CAGTAATCAT CATGATGACT C
     244 (2) INFORMATION FOR SEQ ID NO: 10:
              (i) SEQUENCE CHARACTERISTICS:
     247
                    (A) LENGTH: 29 base pairs
     248
                    (B) TYPE: nucleic acid
                    (C) STRANDEDNESS: single
     249
     250
                    (D) TOPOLOGY: linear
     252
             (ii) MOLECULE TYPE: DNA (genomic)
     254
            (iii) HYPOTHETICAL: NO
C--> 256
             (iv) ANTI-SENSE: NO
             (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 10:
     262 ATATTAAGCT TTTCTTACTC ATCATCTTC
                                                                                   29
     264 (2) INFORMATION FOR SEQ ID NO: 11:
     266
              (i) SEQUENCE CHARACTERISTICS:
     267
                    (A) LENGTH: 14 amino acids
     268
                    (B) TYPE: amino acid
     269
                    (C) STRANDEDNESS: single
     270
                    (D) TOPOLOGY: linear
     272
             (ii) MOLECULE TYPE: peptide
     274
            (iii) HYPOTHETICAL: NO
C--> 276
             (iv) ANTI-SENSE: NO
     278
              (v) FRAGMENT TYPE: internal
     280
             (vi) ORIGINAL SOURCE:
     281
                    (A) ORGANISM: modified galactose oxidase linker
             (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 11:
     284
              Gln Ala Ser Ile Glu Gly Arg Tyr Thr Ala Pro Gln Pro Gln
     286
                               5
     289 (2) INFORMATION FOR SEQ ID NO: 12:
              (i) SEQUENCE CHARACTERISTICS:
     291
     292
                    (A) LENGTH: 18 amino acids
     293
                    (B) TYPE: amino acid
     294
                    (C) STRANDEDNESS: single
     295
                    (D) TOPOLOGY: linear
     297
             (ii) MOLECULE TYPE: peptide
     299
            (iii) HYPOTHETICAL: NO
C--> 301
             (iv) ANTI-SENSE: NO
     303
              (v) FRAGMENT TYPE: internal
     305
             (vi) ORIGINAL SOURCE:
     306
                    (A) ORGANISM: natural immunoglobulin linker
     309
             (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 12:
              Lys Glu Ser Gly Ser Val Ser Ser Glu Gln Leu Ala Gln Phe Arg Ser
     311
     312
              Leu Asp
     317 (2) INFORMATION FOR SEQ ID NO: 13:
              (i) SEQUENCE CHARACTERISTICS:
     319
     320
                    (A) LENGTH: 13 amino acids
     321
                    (B) TYPE: amino acid
```

DATE: 09/07/2001

TIME: 16:24:51

```
Input Set : A:\SUBSTITUTE SEQUENCE LISTING.txt
                       Output Set: N:\CRF3\09072001\1554941.raw
      322
                     (C) STRANDEDNESS: single
      323
                     (D) TOPOLOGY: linear
      325
               (ii) MOLECULE TYPE: peptide
      327
             (iii) HYPOTHETICAL: NO
C--> 329
              (iv) ANTI-SENSE: NO
               (V) FRAGMENT TYPE: internal
      331
      333
              (vi) ORIGINAL SOURCE:
      334
                     (A) ORGANISM: linker peptide
              (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 13:
      337
               Glu Gly Lys Ser Ser Gly Ser Gly Ser Glu Ser Lys Pro
      339
      340
                                5
      342 (2) INFORMATION FOR SEQ ID NO: 14:
      344
               (i) SEQUENCE CHARACTERISTICS:
      345
                     (A) LENGTH: 15 amino acids
      346
                    (B) TYPE: amino acid
      347
                    (C) STRANDEDNESS: single
     348
                    (D) TOPOLOGY: linear
     350
              (ii) MOLECULE TYPE: peptide
     352
             (iii) HYPOTHETICAL: NO
C--> 354
              (iv) ANTI-SENSE: NO
     356
               (v) FRAGMENT TYPE: internal
     358
              (vi) ORIGINAL SOURCE:
     359
                    (A) ORGANISM: linker peptide
              (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 14:
     362
     364
               Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Ser
     365
                                                                         15
     367 (2) INFORMATION FOR SEQ ID NO: 15:
     369
               (i) SEQUENCE CHARACTERISTICS:
     370
                    (A) LENGTH: 31 base pairs
     371
                    (B) TYPE: nucleic acid
     372
                    (C) STRANDEDNESS: single
     373
                    (D) TOPOLOGY: linear
     375
              (ii) MOLECULE TYPE: DNA (genomic)
     377
             (iii) HYPOTHETICAL: NO
C--> 379
              (iv) ANTI-SENSE: NO
     381
              (vi) ORIGINAL SOURCE:
     382
                    (A) ORGANISM: oligo P7
              (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 15:
     385
     387 ACATGTCGAA TTCTTAGGCA TTTGCACTGG C
                                                                                   31
     389 (2) INFORMATION FOR SEQ ID NO: 16:
     391
               (i) SEQUENCE CHARACTERISTICS:
     392
                    (A) LENGTH: 24 base pairs
     393
                    (B) TYPE: nucleic acid
     394
                    (C) STRANDEDNESS: single
     395
                    (D) TOPOLOGY: linear
     397
             (ii) MOLECULE TYPE: DNA (genomic)
     399
            (iii) HYPOTHETICAL: NO
C--> 401
             (iv) ANTI-SENSE: NO
     403
             (vi) ORIGINAL SOURCE:
```

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/554,941

VERIFICATION SUMMARY

PATENT APPLICATION: US/09/554,941

DATE: 09/07/2001 TIME: 16:24:52

Input Set : A:\SUBSTITUTE SEQUENCE LISTING.txt
Output Set: N:\CRF3\09072001\I554941.raw

```
L:29 M:220 C: Keyword misspelled or invalid format, [(A) APPLICATION NUMBER:]
L:30 M:220 C: Keyword misspelled or invalid format, [(B) FILING DATE:]
L:54 M:220 C: Keyword misspelled or invalid format, [(iv) ANTI-SENSE:]
L:79 M:220 C: Keyword misspelled or invalid format, [(iv) ANTI-SENSE:]
L:104 M:220 C: Keyword misspelled or invalid format, [(iv) ANTI-SENSE:]
L:126 M:220 C: Keyword misspelled or invalid format, [(iv) ANTI-SENSE:]
L:148 M:220 C: Keyword misspelled or invalid format, [(iv) ANTI-SENSE:]
L:170 M:220 C: Keyword misspelled or invalid format, [(iv) ANTI-SENSE:]
L:192 M:220 C: Keyword misspelled or invalid format, [(iv) ANTI-SENSE:]
L:214 M:220 C: Keyword misspelled or invalid format, [(iv) ANTI-SENSE:]
L:236 M:220 C: Keyword misspelled or invalid format, [(iv) ANTI-SENSE:]
L:256 M:220 C: Keyword misspelled or invalid format, [(iv) ANTI-SENSE:]
L:276 M:220 C: Keyword misspelled or invalid format, [(iv) ANTI-SENSE:]
L:301 M:220 C: Keyword misspelled or invalid format, [(iv) ANTI-SENSE:]
L:329 M:220 C: Keyword misspelled or invalid format, [(iv) ANTI-SENSE:]
L:354 M:220 C: Keyword misspelled or invalid format, [(iv) ANTI-SENSE:]
L:379 M:220 C: Keyword misspelled or invalid format, [(iv) ANTI-SENSE:]
L:401 M:220 C: Keyword misspelled or invalid format, [(iv) ANTI-SENSE:]
L:423 M:220 C: Keyword misspelled or invalid format, [(iv) ANTI-SENSE:]
L:445 M:220 C: Keyword misspelled or invalid format, [(iv) ANTI-SENSE:]
L:467 M:220 C: Keyword misspelled or invalid format, [(iv) ANTI-SENSE:]
L:489 M:220 C: Keyword misspelled or invalid format, [(iv) ANTI-SENSE:]
L:509 M:220 C: Keyword misspelled or invalid format, [(iv) ANTI-SENSE:]
```